Federal Communications Commission docket 05 – 235 proposes the elimination of a Morse Code testing requirement from the amateur service. And I feel strongly that element 1 should be retained for all classes of license.

When the amateur service was conceived, amateurs had few options but to operate Continuous Wave (C.W.) transmitters. Although this is no longer the case, Morse continues to be an integral part of amateur activity. One cannot doubt this one out listening to the low end of most high frequency bands during a contest weekend. To those who choose to operate Morse Code, it is not an historical artifact, but a living language. Their enthusiasm does not diminish, in spite of the fact that Morse is seldom used for commercial radio service. The popularity of this mode demonstrates its viability in spite of numerous options.

The proposal claims that Morse should be treated like any other mode. One may operate C. W. if he wishes, but is no obligation to do so. If this is the case, then why test specifically for Morse proficiency? The fact is that Morse is not simply a mode, like single side band, frequency shift keying or amplitude modulation, it is also a <u>skill</u>. One may even go as far as to say that it is an art form. Without a basic knowledge of Morse Code timing and the characters, it is impossible to intelligibility send or receive manually. The present an amateur examinations include questions about the proper adjustments of single sideband and frequency modulation transmitters. Correctly answering these questions insurers that equipment will be properly adjusted and transmissions intelligible. Minimal demonstrated proficiency in Morse Code also guarantees that amateurs will be able to communicate effectively. If Morse Code were just another mode and not a skill, one would see much more use of computer generated transmission and reception. After all, this would be an easier way of doing things. However the value of doing something is often in the sheer activity, and can seldom be measured by how easy it is.

The fact that proficiency In the Morse Code only takes a minimal amount of effort is not obvious to those studying for an amateur license. It is a little bit like speaking a foreign language. Unless one has had the privilege of learning it in his youth, the process does take some study and practice. The rewards of proficiency only obvious after the learning process. Travel and exposure to other cultures is usually necessary to whet one's appetite. Likewise, the Morse Code testing requirement exposes newcomers to this symbolic language. Without element 1, Morse Code activity will surely decrease on the amateur bands because few newcomers will realize its utility and potential. After all, they can not really experience C.W. by purchasing a black box. Activity will surely decline over the coming decades. Low bandwidth sub bands will be questioned and the allocations will eventually be lost. Even

those few who have taken the time to learn Morse Code will have no place to utilize their skills. Amateurs would be deprived of a great resource. Their choice of mode and opportunity for experimentation would be greatly diminished.

That is not to say that all amateurs must be an experts in the mode. It is correct to say that one may contribute to the amateur service without ever touching a Morse Code key. The same thing can be said about a microphone or a keyboard. The difference is that most educated individuals know how to speak and to type, while Morse must be learned. Does the Commission really want beginners learning the code characters 'on the air'? Even call signs would be unintelligible! (When operating radiotelephone, we must give our call signs in English and not Hungarian, for example!)

It is ironic that continuous way transmission is one of the most bandwidth effective modes available. For every one operator using single sideband, ten C. W. transmitters would take up less space. Retaining a Morse Code testing requirement has dividends in reducing the effective bandwidth utilized in day to day amateur operations. This dividend will be realized it even though amateurs are not forced to use C.W. How would eliminating the Morse Code test lead to more effective use of the spectrum?

In paragraph seventeen the Commission states that " an individual's ability to demonstrate increased Morse Code proficiency is not necessarily indicative of his or her ability to contribute to the advancement of the radio art". This observation would seem to be self evident because the use of a particular mode has little relationship to advancement of the radio art. However, there is a very strong connection with Morse Code proficiency and technical knowledge. Many amateurs spend much of their time designing and building high frequency transmitters. One's first project is inevitably a Continuous Wave set. Not only is a C. W. transmitter simple to build without an assortment of test equipment, it is also a foundation for other types of transmitters. Without the desire to " home brew" a C. W. rig, most newcomers would never progress to more involved projects. Without experience designing and building Continuous Wave radios, I would never have learned enough basic electronics to began a successful career with the Department of State. Although the DOS no longer utilizes C.W., my amateur experience enabled me to repair and install high frequency, very high frequency and alter a high frequency equipment in use in our embassies and consulates overseas. Before joining the Department of State I had had no formal electronics training, but a wealth of practical experience which was not equaled by most of my colleagues. Those who had experience as radio

amateurs had an advantage in dealing with unforeseen technical challenges. Our diplomatic readiness benefited from their expertise.

Note that many home brewers are also interested in low power operation, or QRP. Most Low power sets run less than five Watts. C.W. is the most effective communications mode for low power field operation.

Eliminate in the Morse Code testing requirement would have an adverse effect upon the "culture" of amateur radio. The amateur radio service is about more than simply utilizing technology. Most of us speak on our cellular telephones frequently. We utilize advanced technology without appreciating its magic and or being involved in the technological process. Unfortunately, much amateur radio operation today is similar to utilizing cellular telephones. Talking on the radio is the means to an end rather than a fascination in itself. It could be argued that an appreciation of the magic of radio coupled with hands on experience in radio technology is an essential part of the amateur radio culture. Only a high level of involvement and enthusiasm will inspire young people to pursue careers in technology and engineering. Note that the public benefit of the amateur radio service is not based on sheer numbers of radio amateurs, but on the enthusiasm and involvement of an elite within the service. In reality, egalitarianism and elitism must be balanced. If the amateur services too elitist, many will be denied the opportunity to experience personal technological involvement. However, it may not seem obvious that, without some elitism and a sense of identity, future high achievers may never enter the amateur ranks. Keeping licensing standards high has served the amateur service well. Contrast it with the Citizens Radio Service, where individuals use technology, but are not involved in experimentation and self training for its own sake. Of course, the stated goals and purpose of the amateur service are different, but <u>what</u> really has really made them different?

Having a cadre of trained Morse operators is a national asset and is definitely in the public interest. This is especially true during times of war and national emergency. The military in third world countries, with only rudimentary technology can build simple Morse equipment for field use. (n.b. the Viet Nam war) At one time, an American cadre of Morse operators could be found in the military, the merchant marine, and the commercial services. Today, amateurs have kept the tradition alive. Their value is even greater than in years past.

Does the Morse Code test actually discourage motivated individuals from joining the amateur ranks? It is not difficult to learn the code at five words per minute. Many youngsters have done it. Most individuals are able to send and receive at 5 words per minute in approximately two weeks of short,

daily practice. Taking the easy route to amateur radio will certainly change our culture. Many experienced amateurs fear that it will become much more like the Citizens Radio Service. It is very dangerous to confuse a greater number of amateurs with a better amateur service. Of course, we wish to swell our ranks, but not at the expense of our competency, enthusiasm, or identity . It would seem more productive to allocate parts of the spectrum for broad bandwidth experimentation, to encourage interfacing with the Internet. If amateurs could run high powered WiFi, many more experimenters presently involved in networking would be attracted to our service. The fact that they are presently not radio amateurs has more to do with attractive alternatives luring them away then a "onerous" Morse Code requirement.

Morse Code has often been a wonderful option for the handicapped. I have been somewhat visually impaired since birth and have found that Morse can be very useful. One of my friends, totally blind, was once able to save his job as a computer programmer by coding an Apple II computer as an ASCII to Morse converter! Even those individuals with poor hearing are able to read 5 word per minute Morse by blinking light, or tactile stimulation. Others, without the ability to speak or type have used eye or mouth operated switches to 'key' their transmitters.

A knowledge of the Morse Code also gives amateurs a historical appreciation of our avocation. Operating a Continuous Wave transmitter and receiver exposes one to the radio phenomenon at its most basic and elemental. It inspires a certain amount of awe and mystery. The operator clearly hears static, fading and interference. Often, he is brain is a sort of human digital signal processing. Operating C.W. gives one an appreciation of what it takes to do the operation electronically. This is certainly been the case during the development of Hellschreiber and PSK 31. Learning Morse Code has ramifications far beyond the ability to use that mode alone. The future can only be understood if we cherish our past. If that means learning a little Morse (or Latin, for that matter), so much the better!

It is my opinion element 1 should retained for all grades of license, especially at the entry level. However, the American Radio Relay League's proposal to keep it for the Extra class only would be better than eliminating it for all classes.

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